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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,870	10/03/2003	Masamichi Iketani	038920.50634D1	9828

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EXAMINER	
VERDIER, CHRISTOPHER M	

ART UNIT	PAPER NUMBER
3745	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/677,870	**Applicant(s)** IKETANI, MASAMICHI	
	Examiner Christopher Verdier	**Art Unit** 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 May 2005*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4-6* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *4-6* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *03 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☒ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☒ Certified copies of the priority documents have been received in Application No. 09/989,520.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 26, 2005 has been entered.

Applicant has argued, in the Supplemental Reply dated May 26, 2005, and in the Reply filed April 12, 2005, that it is improper to conclude that the alleged deformation percentages are disclosed by the cited references (Takenaka 5,056,799, Repella 4,155,560, and Johnen 2003/0189293) because the cited references do not disclose that the drawings are to scale, and are silent as to dimensions. Applicant has further argued that according to MPEP 2125, arguments based on the measurement of drawing features are of little value if the reference does not disclose that the drawings are to scale. Applicant further cited *Nystrom v. TREX Co.*, 339 F.3d 1347 67 USPQ2d 1858 (Fed. Cir. 2003) in support thereof. Applicant noted the examiner's argument in the Advisory Action of April 26, 2005 that the claimed range of elastic deformation is of such a wide range that the cited references inherently disclose this range as measured from the drawings. Applicant stated that the above rules in MPEP 2125 and *Nystrom* are clear and that no exceptions are provided, and that the examiner's reason for maintaining the rejection is contrary to the rules. Applicant further stated that since no legal authority was cited in support of the examiner's reasoning, it is not clear whether the reasoning was based on personal opinion or legal authority, and requested that if the reason is based on legal authority, the examiner is requested to provide the relevant legal authority so that Applicant can evaluate the legal authority and present a suitable response. Applicant also argued that if the reasoning is based on personal knowledge, it is improper.

The above arguments are noted with appreciation. The above arguments are not persuasive, because MPEP 2125 states that "Drawings and pictures can anticipate claims if they clearly show the structure which is claimed. *In re Mraz* 455 F.2d 1069, 173 USPQ 25 (CCPA 1972). However, the picture must show all the claimed structural features and how they are put together. *Jockmus v. Leviton*, 28 F.2d 812 (2d Cir. 1928)". Therefore, based on the above case law, drawings and pictures can logically be said to render obvious the claims. As further set forth in *In re Mraz*, it is stated that "Although patent drawings are not working drawings, this does not mean that things clearly shown in drawings of reference patent are to be disregarded in determining patentability of claims." MPEP 2125 further sets forth that "The drawings must be evaluated for what they reasonably disclose and suggest to one of ordinary skill in the art. *In re Aslanain*, 590 F.2d 911, 200 USPQ 500 (CCPA 1979)."

MPEP 2125 states that "However, the description of the article pictured can be relied upon, in combination with the drawings, for what they would reasonably teach one of ordinary skill in the art. *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977)." One of ordinary skill in the art would recognized that figures 1-4 of Takenaka, figure 2 of Repella, and figure 5 of Johnen reasonably disclose and suggest that the dotted/phantom positions of the seals show the amount of elastic deformation of the lip, which occurs when the tip edge of the seal lip comes in contact with the outer peripheral surface of the cylindrical rotating shaft, is at least 1/10 and up to 7/10 the height of the seal lip in a free state, as set forth below. Takenaka '799 (column 3, lines 1-7) states that the auxiliary lip portion 5a of the seal 5 extends obliquely forwardly from the end portion toward the rotary shaft 2 under a free condition before the lip end 5a comes into contact with the surface of the outer end portion of the lip 6 as indicated by a phantom line in figure 1, and that the auxiliary lip portion 5a is biased in a direction in which an inner circumferential portion of the lip 6 is brought into contact with the rotary shaft 2 under the assembled condition. Similar arguments pertain to the embodiment of figures 3-4. Repella '560 (column 3, lines 5-13) states that the annular extension shown in figure 2 is shown in phantom lines in its as molded configuration, and that when the lip seal is installed, an interference fit is provided with the secondary lip 57 and the auxiliary lip 59 being biased into contact with the shaft 34. Johnen (paragraph 24 and paragraph 43) states that the shaft sealing ring has sealing lip 1 shown as mounted to the shaft 3 (in thick lines) and shown in thin lines as manufactured, and that positions I and I' are the extremes. Therefore, as set forth in MPEP 2125 and *In re Wright*, the description of the article pictured can be relied upon, in combination with the drawings, for what they would reasonably teach one of ordinary skill in the art. Because Takenaka, Repella, and Johnen clearly show the structure which is claimed, as set forth in *In re Mraz*, and because the pictures show all the claimed structural features and how they are put together, as set forth in *Jockmus v. Leviton*, it is respectfully submitted that Takenaka, Repella, and Johnen may be relied upon to teach the claimed seal lip deformation percentages.

Additionally, as set forth in the Advisory Action of April 26, 2005, each of Takenaka, Repella, and Johnen clearly show both the elastically deformed state and the free state in the same single respective drawing figure, and would not show a different scale in moving from one position to another position in the same single respective figure. It is respectfully submitted that the question of whether or not the drawings of Takenaka, Repella, and Johnen are to scale is a moot point, in view of the fact that each of these references clearly shows both the elastically deformed state and the free state in a single figure via the use of dotted/phantom lines. As set forth in the Advisory Action of April 26, 2005, the claimed range of the elastic deformation of the second seal lip being at least 1/10 and up to 7/10 of the height of the second seal lip in a free state is of such a wide and broad range of values that Takenaka, Repella, and Johnen can reasonably be said to disclose this range as measured from the drawings, even if the exact values of the range are not specifically described in the specifications thereof.

Applicant's above citation of *Nystrom v. TREX Co.*, 339 F.3d 1347 67 USPQ2d 1858 (Fed. Cir. 2003) is noted, where Applicant has argued that this case states that "arguments based on drawings not explicitly made to scale in issued patents are unavailing". This case has been carefully reviewed, however, this particular case contains no mention of the above statement. Perhaps Applicant intends to refer to another case. Assuming arguendo that this is the proper case citation, this argument is not persuasive for the above reasons and in light of the all of the case law cited above.

Terminal Disclaimer

The terminal disclaimer filed on November 18, 2004 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 6,712,580 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Information Disclosure Statement

The information disclosure statement filed October 3, 2003 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of Japanese Patent 1-035,982 which is not in the English language. The information in Japanese Patent 1-035,982 has not been considered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 9-21,396 in view of Hosoda 6,682,076 and either (Takenaka 5,056,799 or Repella 4,155,560, or Johnen 2003/0189293) and Japanese Patent 10-331,985. Japanese Patent 9-21,396 (figures 1 and 3) discloses a water pump comprising an unnumbered housing having an inner peripheral surface, an outer-ring raceway 1011 that is formed around a separate outer ring 101 around the inner peripheral surface of this housing, a rotating shaft 12 having an outer peripheral surface formed with an inner-ring raceway 121, a plurality of rolling elements 13 rotatably located between the outer-ring raceway and inner-ring raceway, a seal ring 161 having an outer peripheral edge (not numbered in figure 3) fastened to the inner peripheral surface of the outer ring at one end thereof, a slinger 162 having an outer peripheral surface (not numbered in figure 3) and fitted around the rotating shaft 12, a pulley 130 fastened to the rotating shaft at an outer end thereof, an impeller 14 fastened to the rotating shaft at an inner end thereof, a mechanical seal 150 provided between the inner peripheral surface of the housing and the outer peripheral surface of the rotating shaft and axially between the impeller 14 and the slinger, and an unnumbered space provided axially between the mechanical seal and the seal ring, with the slinger 162 having an outer peripheral edge (near 1621 or 1623) formed with an outer-diameter-side cylindrical section which is concentric with the rotating shaft and has an outer peripheral surface near 1621 or 1623, the seal ring comprising a first seal lip 1612 that comes in sliding contact with the outer peripheral surface of the slinger, and a second seal lip 1613 or 1614 that has a tip edge which comes in sliding contact with the outer peripheral surface near 1621 or outer peripheral surface 1623 of the outer-diameter-side cylindrical section, respectively, and that is tilted inward in the radial direction toward the tip edge thereof. However, the Japanese Patent 9-21,396 does not disclose that the slinger is made from a metal plate, and does not disclose that the amount of elastic deformation of the second seal lip, which occurs when the tip edge of the second seal lip comes in contact with the outer peripheral surface of the outer-diameter-side cylindrical section, is at least 1/10 and up to 7/10 the height of the second seal lip in a free state, and does not disclose that the roughness of a section of the outer peripheral surface of the outer-diameter-side cylindrical section with which where the tip edge of the second seal lip comes in sliding contact is from 0.2 um to 2.0 um in the arithmetic mean Ra, or is from 0.8 um to 8.0 um in the maximum height Ry.

Hosoda (figure 1) shows a seal and slinger combination, with the slinger 3 being made of metal plate, for the purpose of providing a strong and durable material from which the slinger is made of.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the slinger of the Japanese Patent 9-21,396 such that it is formed of metal plate, as taught by Hosoda, for the purpose of providing a strong and durable material from which the slinger is made of. Note that the limitation in claims 4, 5, and 6 of the slinger being "formed by bending" is a product-by-process claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Takenaka (figures 1-4) shows a lip seal 6 for a rotating shaft 2, whereby the amount of elastic deformation of the lip, which occurs when the tip edge of the lip comes in contact with the outer peripheral surface of the rotating shaft, is about 50 percent of the height of the lip in a free state, as a value one of ordinary skill in the art would considered to provide adequate sealing. Repella (figure 2) shows a lip seal 54 for a rotating shaft 34, whereby the amount of elastic deformation of the lip, which occurs when the tip edge of the lip comes in contact with the outer peripheral surface of the rotating shaft, is about 57 percent of the height of the lip in a free state, as a value one of ordinary skill in the art would considered to provide adequate sealing. Johnen (figure 5) shows a lip seal 1 for a rotating shaft 3, whereby the amount of elastic deformation of the lip, which occurs when the tip edge of the lip comes in contact with the outer peripheral surface of the rotating shaft, is about 42 percent of the height of the lip in a free state, as a value one of ordinary skill in the art would considered to provide adequate sealing.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the second seal lip of the Japanese Patent 9-21,396 such that the amount of elastic deformation of the second seal lip, which occurs when the tip edge of the second seal lip comes in contact with the outer peripheral surface of the outer-diameter-side cylindrical section, is at either 50 percent, 57 percent, or 42 percent of the height of the second seal lip in a free state, as taught by either Takenaka, Repella, or Johnen, as values one of ordinary skill in the art would considered to provide adequate sealing.

The modified water pump of Japanese Patent 9-21,396 shows all of the claimed subject matter except for the roughness of a section of the outer peripheral surface of the outer-diameter-side cylindrical section with which where the tip edge of the second seal lip comes in sliding contact being from 0.2 um to 2.0 um in the arithmetic mean Ra, or is from 0.8 um to 8.0 um in the maximum height Ry.

Japanese Patent 10-331,985 (figure 2) teaches that the roughness of a section of an outer peripheral surface 10 of an outer-diameter-side cylindrical section 17 with which a tip edge of a lip seal 3 comes in sliding contact being from 0.5 um to 2.0 um in the arithmetic mean Ra, or is from 0.2 um to 10.0 um in the maximum height Ry, for the purpose of improving sealing performance.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified water pump of Japanese Patent 9-21,396 such that the roughness of the section of the outer peripheral surface of the outer-diameter-side cylindrical section with which the tip edge of a the second seal lip comes in sliding contact is from 0.5 um to 2.0 um in the arithmetic mean Ra, or is from 0.2 um to 10.0 um in the maximum height Ry, as taught by Japanese Patent 10-331,985, for the purpose of improving sealing performance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.V.
June 9, 2005

Christopher Verdier
Primary Examiner
Art Unit 3745